

Tabls de verdad

| B_3 | B_2 | B_1 | B_0 | a | b | c | d | e | f | g |
|-------|-------|-------|-------|-----|-----|-----|-----|-----|-----|-----|
| 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 |
| 0 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 |
| 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 0 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 0 |
| 0 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 |
| 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 |
| 0 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 |
| 1 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 |
| 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 |
| 1 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 0 |
| 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 |
| 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 |
| 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 |
| 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 |
| 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 |

Mapas de karnaugh

Q

| $B_3 B_2$ \ $B_1 B_0$ | 00 | 01 | 11 | 10 |
|-----------------------|----|----|----|----|
| 00 | 1 | 0 | 0 | 1 |
| 01 | 1 | 1 | 1 | 1 |
| 11 | 0 | 1 | 0 | 1 |
| 10 | 0 | 1 | 1 | 1 |

$$\begin{aligned}
 Q = & \overline{B_3} \overline{B_0} + \overline{B_3} B_2 + B_1 \overline{B_0} + \dots \\
 & \dots + B_3 \overline{B_1} B_0 + B_3 \overline{B_2} B_1
 \end{aligned}$$

B

| $B_3 B_2 \backslash B_1 B_0$ | 00 | 01 | 11 | 10 |
|------------------------------|----|----|----|----|
| 00 | 1 | 1 | 0 | 1 |
| 01 | 1 | 1 | 0 | 1 |
| 11 | 1 | 1 | 1 | 1 |
| 10 | 1 | 0 | 1 | 0 |

$$B = \overline{B_1} \overline{B_0} + \overline{B_3} \overline{B_1} + \overline{B_3} \overline{B_0} + \dots + B_3 B_2 + B_3 B_1 B_0$$

C

| $B_3 B_2 \backslash B_1 B_0$ | 00 | 01 | 11 | 10 |
|------------------------------|----|----|----|----|
| 00 | 1 | 1 | 0 | 1 |
| 01 | 1 | 1 | 0 | 1 |
| 11 | 1 | 1 | 1 | 1 |
| 10 | 1 | 0 | 0 | 0 |

$$C = \overline{B_1} \overline{B_0} + B_3 B_2 + \overline{B_3} \overline{B_1} + \overline{B_3} \overline{B_0}$$

d

| $B_3 B_2$ \ $B_1 B_0$ | 00 | 01 | 11 | 10 |
|-----------------------|----|----|----|----|
| 00 | 1 | 0 | 0 | 1 |
| 01 | 0 | 0 | 1 | 1 |
| 11 | 1 | 0 | 0 | 1 |
| 10 | 1 | 1 | 1 | 1 |

$$d = B_3 \bar{B}_2 + B_3 \bar{B}_0 + \bar{B}_3 B_2 B_1 + \dots$$

$$+ \bar{B}_2 \bar{B}_0$$

e

| $B_3 B_2$ \ $B_1 B_0$ | 00 | 01 | 11 | 10 |
|-----------------------|----|----|----|----|
| 00 | 1 | 1 | 0 | 0 |
| 01 | 1 | 1 | 0 | 0 |
| 11 | 1 | 1 | 1 | 0 |
| 10 | 1 | 0 | 0 | 1 |

$$e = \bar{B}_3 \bar{B}_1 + \bar{B}_1 \bar{B}_0 + B_3 B_2 B_0 + \dots$$

$$+ B_3 \bar{B}_2 \bar{B}_0$$

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| $B_1 B_0$ | 00 | 01 | 11 | 10 |
|-----------|----|----|----|----|
| $B_3 B_2$ | | | | |
| 00 | 1 | 1 | 0 | 0 |
| 01 | 1 | 1 | 0 | 0 |
| 11 | 1 | 1 | 1 | 0 |
| 10 | 1 | 0 | 1 | 1 |

$$f = \overline{B_3} \overline{B_1} + \overline{B_1} \overline{B_0} + B_3 B_2 B_0 + B_3 \overline{B_2} B_1$$

8

| $B_1 B_0$ | 00 | 01 | 11 | 10 |
|-----------|----|----|----|----|
| $B_3 B_2$ | | | | |
| 00 | 0 | 0 | 1 | 0 |
| 01 | 0 | 1 | 1 | 0 |
| 11 | 0 | 1 | 1 | 0 |
| 10 | 0 | 0 | 1 | 0 |

$$g = B_1 B_0 + B_2 B_0$$